



Root Cause Analysis

State of Michigan LPI
Methodology Activity 3



What is Root Cause Analysis?



Root Cause Analysis:

a technique to determine the underlying cause of issues and identify where the problem originated



You see, there are several tools that can be used to conduct root cause analysis. Today, we will talk about our favorite one.



THE FIVE WHYS

The Five Whys

requires that you
analyze why a given
issue is happening



Begin by simply asking

"WHY?"



Continue to ask "Why?" until the
ROOT CAUSE is determined



Why?



Why?



Let's see an example
of how the Five
Whys helped the
Jefferson Memorial
from crumbling.



Here is how to
facilitate the activity





Start with identifying
the issue...



Start with identifying
the issue...



**Identify your
issue
statement**

Root Cause

Issue Statement:

The memorial is crumbling

Why?

Too many washings

Why?

Why?

Why?

Why?

"Why" do
we think
it's
crumbling



Root Cause

Issue Statement:

The memorial is crumbling

Why?

Too many washings

Why?

Why?

Why?

Why?

So then we
ask,
"Why are
there so many
washings?"



Root Cause

Issue Statement:

The memorial is crumbling

Why?

Too many washings

Why?

Why?

Why?

Why?

That's
because
there is a
lot of bird
waste!



Root Cause

Issue Statement:

The memorial is crumbling

Why?

Too many washings

Why?

To remove bird waste

Why?

Why?

Why?

So then,
why is
there too
much bird
waste?





Root Cause

Issue Statement:

The memorial is crumbling

Why?

Too many washings

Why?

To remove bird waste

Why?

Why?

Why?

Because there
is a large
spider
population for
the birds to
eat!



Root Cause

Issue Statement:

The memorial is crumbling

Why?

Too many washings

Why?

To remove bird waste

Why?

Too many spiders

Why?

Why?

Okay, good...
So then why is
there a large
spider
population?



Root Cause

Issue Statement:

The memorial is crumbling

Why?

Too many washings

Why?

To remove bird waste

Why?

Too many spiders

Why?

Why?

Probably
because
the memorial
has a lot of
midges for the
spiders
to eat



Root Cause

Issue Statement:

The memorial is crumbling

Why?

Too many washings

Why?

To remove bird waste

Why?

Too many spiders

Why?

Midge population

Why?

So then why is
there a large
midge
population?



Well...



**the midges are
attracted to the
memorial lights!**

Root Cause

Issue Statement:

The memorial is crumbling

Why?

Too many washings

Why?

To remove bird waste

Why?

Too many spiders

Why?

Midge population

Why? Lights attract midges

So then the
last "why?"
is the
memorial
lights!





So there's your
Root Cause!



**Now, think about
solutions!**



The lights are turned on
BEFORE *dusk...*



...so turning on the lights

AFTER *dusk*

would no longer

attract as many midges



There are now fewer
midges at the memorial,





**which breaks the food chain
and reduces the need for
washings**

HAD YOU STOPPED ASKING "WHY?"...

***You may
have not
addressed
the true***

**ROOT
CAUSE**

• The "solution" may have been more labor intensive and costly, like bird removal...



The "solution" may have been more labor intensive and costly, like bird removal...





...or it may not have worked at all

Root Cause

Issue Statement:

Why?

Why?

Why?

Why?

Why?

***Generally, this is
why the "Five Whys"
is recommended to
get to the true root
cause***

With this tool,

**you can determine
the true Root Cause
to solve any issue!**





Click below for
the module
review!

THE INTENDED AUDIENCE FOR THIS MODULE IS STATE OF MICHIGAN EMPLOYEES ONLY AND THE USE OF THIS MATERIAL IS THE SOLE RESPONSIBILITY OF THE AUDIENCE